

TECFLOOR® PU CEM

Poly Urethane Concrete Flooring



TECFLOOR® PU CEM is a four-component PU floor topping recommended for the most critical applications in the industry. TECFLOOR® PU CEM provide outstanding abrasion resistance, chemical resistance, thermal resistance & hence can be applied on those area where heating & cooling occur intermittently.

Uses

- Food & beverage production
- Pharmaceutical & chemical plants.
- Warehouse & loading docks
- Automobiles floors with heavy traffic movement
- Slaughter industry

Benefits

- **Fast application-** Can be applied to 7 days old concrete.
- **Chemically resistant-** Good resistance to a wide range of chemicals.
- **Durable-** Excellent wears & impact, thermal, abrasion resistance.
- **Hygienic & Safe-** Provides a dense, impervious, seamless floor surface which is easily cleaned.
- **Attractive-** Available in a wide range of colors to enhance the working environment.

Technical support

Thermax offers a comprehensive range of high performance, high quality, flooring, jointing and repair products for both new and existing floor surfaces. In addition, the company offers a comprehensive technical support service to specifies, end users and contractors. It is also able to offer on-site technical assistance.

Design criteria

TECFLOOR® PU CEM is designed for application at a nominal thickness of between 2 – 4 mm.

Substrates should be sound and not suffer, or be likely to suffer, from rising dampness. If necessary, suitable damp-proof membranes should be installed to prevent this.

Properties

The values given below are average figures achieved in laboratory tests. Actual values obtained on site may show minor variations from those quoted.

Mixed Density	1.75-1.85 gm/cc
Pot Life	10-15 min @ 27°C
Application Thickness	2 - 4 mm
Finish	Matt
Tack free Dry	1 - 2 hrs
Hard Dry	24 hrs
Compressive Strength @ 7 Days (BS 6319 pt 2)	45-50 N/mm ²
Flexural Strength @ 7 Days (BS 6319 pt 3)	15-20 N/mm ²
Tensile Strength @ 7 Days (BS 6319 pt 7)	5-8 N/mm ²
Shore D Hardness (ASTMD 2240)	80-85
Abrasion Resistance (ASTMD 4060)	75-80 mg loss

Chemical Resistance-

Excellent resistance is observed against distilled water, detergent solutions, alkalis & acids. Chemical spillage should always be wiped up as quickly as possible & not to be allowed to concentrate up by evaporation. The data on the list of the chemical found resistance to this product during our lab study.

1. Dilute mineral acids, including Hydrochloric (<35%), Phosphoric (<50%) & Sulphuric (<30%).
2. Alkalis including potassium hydroxide to a 50% concentration.

Note- Full chemical resistance is only achieved after 48 hours curing.

Instructions for use

TECFLOOR® PU CEM should be applied by specialist contractors who must follow the procedures laid down in the Product Method Statement. Thermax works with a network of such applicators that have been trained in the correct installation procedures. The following steps are involved in the application which would normally take place over a 2 to 3 day period.

Surface Preparation

It is essential that TECFLOOR[®] PU CEM is applied to sound, clean surfaces in order that maximum bond strength. All dust and debris should be removed prior to application of the product or its primer. Surface should be grinded using high abrasion grinders. It is highly recommendable to use shot blasting & scarification.

Mixing

TECFLOOR[®] PU CEM contains 4 components; Resin, Hardener, Filler & Pigment which are ready for immediate on-site use. Part mixing of these components is not acceptable and will affect both performance and appearance of the finished floor.

Mixing should be carried out using either a forced action mixer; or a heavy duty, slow-speed drill fitted with mixing paddle. All such equipment should be of a type and capacity approved by Thermax. The components should be mixed in a suitably sized mixing vessel.

Add pigment to resin mix homogeneously, add hardener & again mix thoroughly until a homogeneous paste is formed & in the last add filler.

Application

The applicator should ensure that there are sufficient supplies of plant, labour and materials to make the mixing and subsequent application process a continuous one for any given, independent floor area.

Once mixed, the material must be used within its specified pot life - see "**Properties**" section.

The material should be poured onto the prepared and primed substrate as soon as mixing is complete. It should be spread to the required thickness using a serrated trowel; with care taken not to overwork the resin, spreading evenly and slowly.

Immediately after laying, the material should be rolled, using a spiked nylon roller, to remove slight trowel marks, and to assist air release. The rolling should be carried out using a 'back and forth' technique along the same path. An overlap of 50% with adjacent paths is recommended.

Further light rolling may be required to remove surface imperfections, or for subsequent release of trapped air, but should be prior to the setting of the product.

Cleaning

TECFLOOR[®] PR and TECFLOOR[®] PU CEM should be removed from tools and equipment with Cleaning Sol immediately after use. Hardened material can only be removed mechanically.

Maintenance

The service life of a floor can be considerably extended by good housekeeping. Regular cleaning may be carried out using a rotary scrubbing machine with a water miscible cleaning agent at temperatures up to 50°C.

Health and safety Instructions

TECFLOOR[®] PU CEM, TECFLOOR[®] PR and Cleaning Solution should not come in contact with the skin and eyes, or be swallowed. Ensure adequate ventilation and avoid inhalation of vapours. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye protection.

In case of contact with skin, rinse with plenty of clean water, then cleanse with soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - **do not** induce vomiting.

Fire

TECFLOOR[®] PR and Cleaning Sol are flammable. Keep away from sources of ignition. No smoking. In the event of fire extinguish with CO₂ or foam do not use a water jet.

TECFLOOR[®] PU CEM is non-flammable.

Flash points

TECFLOOR [®] PR	:	30°C
Cleaning Solution	:	33°C

Disposal

Spillages of component products should be absorbed on to earth, sand or other inert material and transferred to a suitable vessel. Disposal of such spillages or empty packaging should be in accordance with local waste disposal regulations.

For further information, refer to the Product Material Safety Data Sheet.

TECFLOOR[®] PU CEM

Storage

Shelf life

TECFLOOR[®] PU CEM has a shelf life of 6 months if kept in warehouse conditions at 30°C in the original, unopened pack. It should be kept in a cool & dry place, away from sunlight.

Storage conditions

Store in dry conditions between 5°C to 30°C (away from sources of heat and naked flames), in the original, unopened packs. If stored at high temperatures the shelf life will be reduced.

Packing

TECFLOOR [®] PU CEM	:	16 ltr pack
TECFLOOR [®] PR	:	1 & 4 ltr packs
Cleaning Solution	:	5 & 20 ltr pack

Coverage

TECFLOOR [®] PU CEM	:	4 m ² /pack @ 4 mm thickness
TECFLOOR [®] PR	:	5.5 - 6.5 m ² /ltr

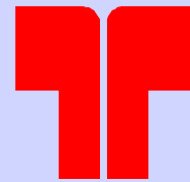
Note : The coverage figures given are theoretical - due to wastage factors and the variety and nature of possible substrates, practical coverage figures will be reduced Typically, an additional 10% should be allowed for surface irregularities and wastage although this will vary with site conditions.

Other Segments:

- Concrete Admixtures • Surface Treatments • Grouts & Anchors • Repair & Rehabilitation
- Protective Coatings • Industrial Flooring • Waterproofing • Sealants • Adhesives

Disclaimer: The information contained in this document is true and accurate to the best of our knowledge and is based on our experience & test results. It is always the Company's endeavor to give true and accurate information however as it does not have any direct and/or continuing control on the use of the Products, the Company cannot accept any liability, direct or indirect as a consequence of the use of Products. In the event of any doubt upon any critical parameter it is advisable to seek clarification from our technical representative.

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